



QUIZ 6

Operating System Support

Question 1

Which one of the following is most likely not a main factor contributing to delay for an RMI invocation?

- a) Data copying.
- b) Marshaling.
- **c) Obtaining a remote reference.**
- d) Packet initialization.
- e) Thread scheduling and context switching.

Question 2

Which of the following orderings is from fastest to slowest?

- a) Interprocess on remote host, Interprocess on same host, System Call, User space procedure.
- b) Interprocess on same host, Interprocess on remote host, System Call, User space procedure.
- c) System Call, User space procedure, Interprocess on same host, Interprocess on remote host.
- d) User space procedure, System Call, Interprocess on remote host, Interprocess on same host.
- **e) User space procedure, System Call, Interprocess on same host, Interprocess on remote host.**

Question 3

Which one of the following is most likely not a well-known thread model?

- **a) Thread-per-queue.**
- b) Thread-per-object.
- c) Thread-per-request.
- d) Thread-per-connection.
- e) Actually, all of the above are well known.

Question 4

Which of the following is not true?

- a) Creating a new thread within an existing process is likely to be more expensive than creating a process.
- b) Switching between threads within the same process is as cheap as switching between threads running on different processes.
- c) Separate processes can share data and other resources as efficiently as threads can do within a process.
- d) Threads within a process are protected from one another.
- **e) None of the above are true statements.**

Question 5

In the thread-per-request architecture:

- a) The server creates a fixed pool of threads to process client requests.
- **b) A new thread is created for each client request.**
- c) For each client connection, a new thread is created to serve all of the client's requests.
- d) A thread is responsible for handling all the requests made to a specific remote object.
- e) A thread is associated with all the requests sent to a specific queue.

Question 6

The main difference between a network operating system and a distributed operating system is that:

- a) A network operating system hides the existence of many machines from the user, but a distributed operating system makes the existence of many machines visible.
- **b) A distributed operating system hides the existence of many machines from the user, but a network operating system makes the existence of many machines visible.**
- c) A network operating system uses a local-area network, while a distributed operating system uses a wide-area network.
- d) A distributed operating system uses a local-area network, while a network operating system uses a wide-area network.
- e) Nothing, they are equivalent.

Question 7

Which of the following is not a mechanism for allowing two processes to communicate with one another?

- a) Remote procedure call.
- b) Message passing.
- **c) Context switching.**
- d) Shared memory.
- e) All of the above allow two processes to communicate.

Question 8

Which of the following is not considered an invocation mechanism?

- **a) Accessing an object in a shared memory space.**
- b) Making a system call.
- c) Making a remote procedure call.
- d) Making a remote method invocation.
- e) Calling a procedure on a local object.

Question 9

A single system image refers to:

- a) A system in which users need to be aware of where their programs run and the location of resources.
- b) A single operating system that controls a network of computers.
- c) A network of homogeneous computers.
- d) An instance of a single computer connected to a network.
- **e) Multiple computers that appear and behave like one system to the user.**

Question 10

It is the responsibility of a process management component in an operating system to:

- a) Dispatch interrupts and system call traps.
- b) Manage the communication between threads attached to different processes on the same computer.
- **c) Manage the creation of and operations upon processes.**
- d) All of the above.
- e) Both b) and c).